

REMARKS

Claims 1-8, and 10-26 stand pending in the instant application. Claims 21-26 have been cancelled, while claim 27 is newly added by this amendment, leaving claims 1-8, 10-20, and 27 pending upon entry of this amendment. Applicants acknowledge that a claim 9 was not filed in the application as originally filed. No new matter has been added.

Restriction

The Examiner requires restriction to one of the following inventions below required under 35 U.S.C. 121:

- I. Claims 1-8, 10-20, drawn to an electrode fluid distributor, classified in class 429, subclass 39.
- II. Claims 21-22, drawn to a method of moving gas in a fuel cell, classified in class 429, subclass 34.
- III. Claims 23-26, drawn to a method of operating a fuel cell, classified in class 429, subclass 13.

During a telephone conversation with the Examiner on April 15, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-20. Applicants affirm this election in replying to this Office action. Claims 21-26 have been cancelled by this amendment and reserve the right to file divisional applications thereon.

Drawings

Figures 1 and 2 stand objected to as the Examiner submits they should be

designated by a legend such as --Prior Art-- because only that which is old is illustrated. Pursuant to the Examiner's request, Figures 1 and 2 have been amended to include a legend such as --Prior Art-- . Thus, it is respectfully requested that any rejection to the drawings be withdrawn.

§112 Rejections

Claims 13-20 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse.

In claim 13, line 10, the Examiner claims there is no antecedent basis for the work "interconnect" and that claims 14-20, dependent on claim 13, fall therewith. Applicants have amended claim 13 by deleting any reference to "interconnect" and replacing the same with "electrode fluid distributor" having proper antecedent basis. Thus it is respectfully requested that any rejection to claims 13-20 be withdrawn.

Provisional Rejections

Claims 1-8, 10-20 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-16, 18 and 25-29 of copending Application No. 09/747,752. The Examiner states that although the conflicting claims are not identical, they are not patentably distinct from each other because the instant application recites the baffle extending from the separator toward the first electrode, which limitation is not part of the 09/747,752 claimed subject matter. The Examiner concludes that it would have been obvious to one of ordinary skill in this art to

have extended the baffle in the 09/747,752 structure so that a higher efficiency of air flow would have been achieved in the distributor therein. Applicants acknowledge that this is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Not in prior art!

It is respectfully noted that the Examiner admits with respect to claims 2 and 5 of copending Application No. 09/747,752 in Paper No. 6 thereof, that “the prior art of record does not teach the limitations of either claims 2 or 5 which disclose a passage in the baffle and openings in the wall between the segments of the electrode fluid distributor nor the location of the inlet and outlet at the edge of the distributor of claim 13.”

(Emphasis added.) It is further noted that the prior art of record in copending Application No. 09/747,752 includes U.S. Pat. No. 6,251,308 (Butler) and U.S. Pat. No. 6,461,754 (Zeng) cited in the instant Office action with respect to the 35 U.S.C. §102(e) rejections discussed more fully below.

§102 Rejections

Claims 1, 8, 10-13, 18 and 19 stand rejected under 35 U.S.C. §102(e) as being anticipated by Butler-U.S. Pat. No. 6,251,308. (Butler). Applicants respectfully traverse.

To anticipate a claim under 35 U.S.C. § 102, a single source must contain all of the elements of the claim. *Lewmar Marine Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1007 (1988). Moreover, the single source must disclose all of the claimed elements “**arranged as in the claim.**” (Emphasis added.) *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the

knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

The Examiner references Figure 1 of Butler along with column 2, lines 13-22 and column 7, lines 19-42. The Examiner alleges that in Figure 1 of Butler, there are three areas in the plate 10 that depict the inlet and outlet segments and that they are the segments on either side of the single baffles at the top of the triangular formed figures near the bottom of the plate 10 as seen in Figure 1.

It is respectfully submitted that Applicants are unable to realize or discern any "segments" in conjunction with "baffles", as neither is described as such in Butler, nor is readily realized in Figure 1 in conjunction with the Examiner's characterization of the same.

Butler more accurately discloses molded into thin plate-like specimens intricately patterned network of very narrow, relatively smooth, flow passages used as electrochemical cell bipolar plates. (See Field of Invention.) More specifically with reference to Figure 1 which the Examiner relies, Butler discloses that plate 10 includes a fluid flow face with one or more generally parallel and or serpentine flow channels 12. The flow channels receive and transmit fluids through ports 14 and 16 which are in fluid communication with corresponding entry and exit fluid manifolds 18 and 19. The plate may include a number of peripheral through holes 20 that act as a manifold for fuel transportation. (Col. 7, lines 30-42.) Butler does not disclose segments of any kind, never mind a plurality of segments, wherein each segment pair includes an inlet segment and an adjacent outlet segment with a baffle disposed therebetween.

Butler does not teach or suggest delineated segment pairs each comprising an inlet segment and an adjacent outlet segment with a baffle disposed therebetween,

wherein said inlet segments are in fluid communication with an inlet, subsequent inlet segments, and adjacent outlet segments, and said outlet segments are in fluid communication with an outlet and subsequent outlet segments, as in claims 1 and 13, as well as in newly added claim 27. Thus claims 1, 13, and 27, including claims depending therefrom, i.e., claim 2-8, 10-12, and 14-20, define over Butler.

Claims 1, 8 and 10-12 stand rejected under 35 U.S.C. §102(e) as being anticipated by Zeng U.S. Pat. No. 6,461,754. (Zeng) Applicants respectfully traverse.

The Examiner makes reference to Figures 1 and 2 of Zeng, along with column 3, line 44 through column 4, line 29, which the Examiner alleges teach fluid segments in a fuel cell. However, it is respectfully submitted that the Examiner has not pointed out whether Zeng discloses a baffle disposed between an inlet segment and an adjacent outlet segment, and if Zeng does, which it does not, how fluid communication exists between an inlet segment and adjacent outlet segment, as well as with subsequent inlet and outlet segments.

Zeng discloses a coolant circulation circuit made up of a coolant flow field plate having a surface opposed to a cell surface, an open faced coolant flow channel formed in a major region of the surface of the coolant flow field plate, the open-faced coolant flow channel being divided into a plurality of divisional passages in regional fashion, a coolant inlet port at one end of each of the divisional passages, and a coolant outlet port at the other end of each of the divisional passages. Thus, Zeng teaches away from fluid communication with an inlet, subsequent inlet segments, and adjacent outlet segments, and said outlet segments are in fluid communication with an outlet and subsequent outlet segments as Zeng teaches individual inlets and corresponding outlets for each regional divisional passage.

Zeng does not teach or suggest delineated segment pairs each comprising an inlet

segment and an adjacent outlet segment with a baffle disposed therebetween, wherein
said inlet segments are in fluid communication with an inlet, subsequent inlet segments,
and adjacent outlet segments, and said outlet segments are in fluid communication with
an outlet and subsequent outlet segments, as in claims 1 and 13, as well as in newly
added claim 27. Thus claims 1, 13, and 27, including claims depending therefrom, i.e.,
claim 2-8, 10-12, and 14-20, define over Zeng.

CONCLUSION

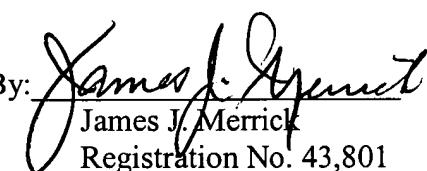
If, however, any issues remain, the Examiner is cordially invited to contact the undersigned so that such issues may be promptly resolved.

In the event any further fees are due with respect to this amendment or otherwise, please charge them to Deposit Account No. 06-1130, maintained Applicants' Attorneys.

Respectfully submitted,

CANTOR COLBURN LLP

By:



James J. Merrick
Registration No. 43,801
Customer No. 23413

Date: October 3, 2003
Address: 55 Griffin Road South, Bloomfield, Connecticut 06002
Telephone: (860) 286-2929